

**Notice of Allowability**

Application No.

09/975,030

Examiner

Dwin M. Craig

Applicant(s)

SNYDER ET AL.

Art Unit

2123

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/21/2005.
2. ☒ The allowed claim(s) is/are 1-26.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>1/13/2006</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment                              |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                                | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|   | 9. <input type="checkbox"/> Other _____   |

**DETAILED ACTION**

**And**

**EXAMINER'S REASONS FOR ALLOWANCE**

1. Claims 1-26 are allowed.

*Examiner's Reasons for Allowance*

2. The following is an examiner's statement of reasons for allowance: Claims 1-26 are allowed for at least the reasons cited below.

**2.1** As regards independent claim 1, the following limitations, in combination with other limitations are neither anticipated nor made obvious by the prior art, *"the emulator device implementing the DUT and executing instruction in lock-step with the DUT"*. Applicants' persuasive arguments presented on page 11 of the 11/21/2005 response have been sufficient to overcome the 35 USC § 102(b) rejections of independent claim 1. More specifically, Applicants' argument, *[Applicants respectfully assert that the system of Coker cannot "execut(e) instruction(s) in lock-step with DUT" as recited in claim 1 because of the need for the shadow system to halt execution during input to the target system.]* clearly shows how Applicants' expressly claimed limitations read past the *Coker* reference. The Examiner notes that according to Applicants' implied definition of what *"lock-step"* refers to an ICE using Applicants' claimed method can never *"stop"* or *"halt"* in order to record data to a recording media and there can be no *"slight delay"*, all data is transferred instantly between the DUT and the emulator device. The Examiner further notes that if there is no *"slight delay"* between the emulator device and the DUT then there can be no buffering or latching of any kind between the DUT and the emulator device because, this would then create a *"slight delay"*. Please see page 11 of Applicants'

Art Unit: 2123

*remarks in the 11/21/2005 responses in regards to what the expressly claimed limitation of lock-step is in regards to the rejection of claim 1 using the prior art reference Coker.*

**2.2** As regards independent claim 5 the following limitations, in combination with other limitations, are neither anticipated nor made obvious by the prior art, “*wherein the microcontroller is coupled to the emulator device via the interface, the microcontroller executing the instructions in lock-step with the emulator device*”. Applicants’ persuasive arguments presented on page 11 of the 11/21/2005 response have been sufficient to overcome the 35 USC § 102(b) rejections of independent claim 5. More specifically, Applicants’ argument, [*Applicants respectfully assert that the system of Coker cannot “execut(e) instruction(s) in lock-step with DUT” as recited in claim 1 because of the need for the shadow system to halt execution during input to the target system.*] clearly shows how Applicants’ expressly claimed limitations read past the Coker reference. The Examiner notes that according to Applicants’ implied definition of what “*lock-step*” refers to an ICE using Applicants’ claimed method can never “*stop*” or “*halt*” in order to record data to a recording media and there can be no “*slight delay*”, all data is transferred instantly between the microcontroller and the emulator device. The Examiner further notes that if there is no “*slight delay*” between the emulator device and the microcontroller then there can be no buffering or latching of any kind between the microcontroller and the emulator device because, this would then create a “*slight delay*”. Please see page 11 of Applicants’ *remarks in the 11/21/2005 responses in regards to what the expressly claimed limitation of lock-step is in regards to the rejection of claim 5 using the prior art reference Coker.*

**2.3** Dependent claims 2-4 and 6-16 are allowed for at least the reason that they depend upon an allowed base claim.

Art Unit: 2123

2.4 As regards independent claims 17 & 26 and dependent claims 18-25 please see the previous Non-Final Office Action for the reasons for indicating allowable subject matter.

2.5 Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


*Conclusion*

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwin M. Craig whose telephone number is (571) 272-3710. The examiner can normally be reached on 10:00 - 6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DMC

  
Paul L. Rodriguez 2/2/06  
Primary Examiner  
Art Unit 2125